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Some Personality Correlates of Religious Attitudes, as Determined by Projective Techniques

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PREFACE

THIS study was submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at the University of Southern California, June, 1950.

Acknowledgements are made to the writer's doctoral committee, Professors David D. Eitzen, Chairman, J. P. Guilford, Paul Irwin, Eric Titus, and S. Medford Wesley, who guided the dissertation. Thanks are also expressed here to the sixty subjects comprising the human raw material of the research. Without the willing cooperation of these persons the study would have been impossible.

SOME PERSONALITY CORRELATES OF RELIGIOUS ATTITUDES, AS DETERMINED BY PROJECTIVE TECHNIQUES

I. PURPOSE

THE ORIGINAL purpose of this study was to determine the "emotional maturity" of religious conservatives and liberals by means of projective techniques. Willoughby (21), Woodward (23), Symington (16), and Shrout (14) have made investigations by means of questionnaires of the emotional characteristics of religious persons. With the exception of the last, these investigators have concluded that generally liberals are more "emotionally mature" than conservatives. According to Shrout's findings, however, the degree of religious attitude toward God and the nature of a person's religious experience (in our society and culture) has little or no bearing on his score on the Willoughby "Emotional Maturity" scale.

Since the writer found the concept of "emotional maturity" loosely defined, the aim was adopted of comparing religious liberals and conservatives on specific personality variables which authorities consider to be measures of adjustment or maturity, emotional, intellectual, or social. An attempt was made to sample widely from such characteristics, presumably measured by the tests which were employed in the study.

As might be expected, the terms "conservative" and "liberal" are likewise inadequately defined for scientific usage. Therefore, two groups of persons were selected for the proposed comparison, differing not only significantly but widely from each other on two religious attitude scales; so that "conservative" and "liberal" are understood here to mean "as defined by the two selective tests" (described in Section III).

Hypotheses which were set up for guidance of the study were stated as follows:

1. *Religious liberals are more "emotionally mature" than religious conservatives.* "Emotionally mature" was taken as "maturity in general." It was considered that a favorable balance on the liberal or conservative side of a number of personality factors accepted by most authorities as representing adjustment would tend to prove or disprove this hypothesis. These factors were specifically stated in terms of scores on the personality tests employed.

2. *Rigidity of personality structure and conservative religious attitudes are positively correlated.*

3. *Different types of emotional control are found in both groups, so that the same external type of behavior, classed as mature or immature by both subject and observer, will be found to issue from different forms of emotional organization.*

4. *Conservative individuals are more guilt-ridden than liberals.*

5. *Liberals tend to gloss over aggression-provoking situations more than conservatives.*

6. *A greater need for dependence is found in the conservative.*

II. SUMMARY OF RESEARCH

An outline of the over-all procedure employed to test the above hypotheses is presented here:

1. A preliminary selection of churches representing conservative, liberal, and "mixed" congregations, total of 21.

2. Securing of cooperation of pastors and/or leaders for nonselective lists of

persons in churches.

3. Distribution of Salvation Opinionnaire by mail and directly through church groups, total of 1035.

4. Simultaneous distribution of blank for identifying information.

5. Division of the first group of respondents, 351 persons, into two main "populations" representing liberals and conservatives. Selection of possible subjects from persons about the submeans.

6. Administration of Ferguson (religious attitude) scale and Wonderlic Personnel Test (intelligence) to possible subjects to obtain 30 subjects for each group. (Elimination of 20 persons out of 80 possible subjects on the basis of low scores on Wonderlic, or on the basis of Ferguson scores not in accord with Salvation Opinionnaire; these persons called "eliminees" hereafter.)

7. Administration of Rosenzweig Picture-Frustration Study, Thematic Apperception Test, and Rorschach to subjects.

8. Transcribing, scoring, etc., of test protocols; statistical treatment of scorable data.

The location of the research was in Southern California in two large, practically contiguous cities, representing populations of considerable variety of background. Research was conducted in the summer of 1949.

Religious populations were found in 21 churches, 17 in one city and 4 in the other. Denominations included are: Baptist, Church of God, Congregational, Friends (or Quakers), Lutheran (Missouri Synod and American Lutheran), Methodist, Mission Covenant, Presbyterian, Unitarian, and Universalist. Independent churches include: Pentecostal Tabernacle-type (Baptist doctrine), and Unity-type (Theosophical—semi-Christian Sci-

ence). All but the first and the last above contributed at least one subject to the study.

Identifying information concerning the 60 persons who participated as subjects of research is given in Tables 1 and 2. Note that in spite of an attempt to keep subjects comparable, Liberals' mean age and educational level differed significantly from those of Conservatives at the 5 per cent level. Conservatives' mean occupational rating (higher mean signifies lower status) was significantly higher than Liberals' (2 per cent level). It is also to be noted that men and women were distributed evenly in each group.

III. SELECTION AND USE OF TESTS

Since the study was to depend exclusively on tests, the selection of tests was considered important. The Salvation Opinionnaire has been satisfactorily validated both by a chi-square item analysis on a large population and by the judgment of qualified individuals (19). Ferguson's Primary Social Attitude No. 1, developed by means of factor analysis (7, 8) and administered to two independent student populations, was found to denote what Ferguson believes is an operationally stable factor, Religionism. The Pearson product-moment r between these two measures on the writer's subjects and eliminatees together is .73; on subjects alone r is .77. Both of these coefficients are significant at the 1 per cent level.

Form F of the Wonderlic Personnel Test was found to be satisfactory from several standpoints: its ease of administration; its twelve-minute time limit; its adequate reliability (r : .88 to .94 on odd-even items on different forms); its validity in both practical personnel selection

and compared with its parent, the Otis Self-Administering Test of Mental Ability, Higher Examination (r : .81 to .87); and lastly, its disarming title (22).

To obtain as wide a sampling of personality structure and functioning for measurement of "maturity" factors, the Rosenzweig P-F Study, the Rorschach, and TAT cards 2, 3BM, 3GF, 4, 6GF, 8BM, 11, 14, 15, and 16 were selected.

Exclusive utilization of tests makes the conclusions of the study dependent on the validity and reliability of the instruments as well as the reliability of the scorer. None of the projective tests employed has proved itself to the same degree of statistical satisfaction that other more "objective" tests have proved themselves, although the clinician believes they are sufficiently valid and reliable to be useful.

Bernard (3) has conducted some reliability studies on the Rosenzweig. Tomkins (17) and Bell (2) present references to many studies which can be considered validation attempts for the TAT. Bell (2) summarizes validity research on the Rorschach.

As to the use of these tests, the Salvation Opinionnaire was sent out through the mail or administered directly to Sunday-school classes or other church groups. On the first contact with potential subjects the writer administered the Ferguson, Wonderlic, and Rosenzweig. In two instances the Rorschach and TAT were likewise given on first contact, but in most cases they were administered in two sessions. Administration was standard according to Rosenzweig's, Klopfer's, and Murray's instructions, with the exception that only on the first two cards of the TAT were the subjects reminded of the time. Protocols were manually recorded with a

relatively efficient mongrel shorthand the writer has developed. Tests were given privately in any one of three offices or in the homes of subjects.

TABLE 1
IDENTIFYING INFORMATION ABOUT SUBJECTS

Item	Conservatives	Liberals
Number of subjects		
Male	15	15
Female	15	15
Marital status		
Married	27	23
Single	3	3
Divorced		2
Widowed		2
Students	3	4
Offspring	48	59

IV. EXPERIMENTAL PROCEDURE

A. CONTROL OF NONEXPERIMENTAL VARIABLES

In planning research the factors which were considered relevant to the study were set down, to be controlled if possible. These factors with the control measures exerted are as follows:

1. *Race.* Only "white" churches were selected.
2. *Background (sectional, geographical).* The two cities are cosmopolitan to a higher degree than most cities in the country.
3. *Religious tradition (Catholic, Jewish, Protestant).* Protestants only were selected. One person in each group is of Jewish background.
4. *Socioeconomic status.* Since incomes did not differ significantly (Table 2), even though occupational levels did to an extent, and social class differences were thus minimized (though, of course, other factors enter into social class distinctions), it seems reasonable to suppose that socioeconomic status would not significantly affect the experimental variables.
5. *Sex.* Fifteen persons in each group were male and fifteen female.
6. *Position in family.* The writer considered, perhaps wrongly, that this factor is not sufficiently relevant to require control, despite emphases of Adlerian dynamics.
7. *Age.* An attempt was made to keep subjects

TABLE 2
COMPARISON OF SUBJECTS ON IMPORTANT SELECTIVE FACTORS

Item	Mean	SD	<i>t</i>	Significance Level
Age				
Conservatives	33.87	7.90	2.02	5%
Liberals	38.63	9.94		
Education				
Conservatives	15.37	1.84	2.03	5%
Liberals	16.40	2.03		
Occupation ^a				
Conservatives	3.23	1.61	2.52	2%
Liberals	2.23	1.41		
Family Income ^b				
Conservatives	5.07	3.77	.89	—
Liberals	4.37	1.89		
Salvation Opinionnaire ^c				
Conservatives	7.84	.17	27.33	1%
Liberals	4.00	.74		
Ferguson ^e				
Conservatives	85.00	7.11	11.86	1%
Liberals	46.62	15.84		
Wonderlic ^d				
Conservatives	30.13	5.21	1.02	—
Liberals	31.77	6.89		

^a Higher mean signifies lower status.

^b In thousands of dollars.

^c Religious attitude scales.

^d Intelligence scale.

between twenty-five and sixty, a condition it was impossible to fulfill. The means differ significantly (Table 2), Liberals higher than Conservatives. Inspection reveals that the trend appears to be the same in the populations from which subjects were drawn.

To test whether age did have some influence on scores, a simple analysis of variance test was run to determine the influence of age and religious attitude on Rorschach *R* scores. Twelve cases were selected at random from each group for each of the age ranges, twenty to thirty-five and thirty-six to fifty. The results shown in Table 3 indicate that the influence of age itself is not important. The influence of attitude is very important, the *F* ratio being significant at the 1 per cent level. But also the interaction of age and attitude is significant at the 5 per cent level. One would suspect that both higher chronological age and liberal religious attitude together increase one's susceptibility to Rorschach stimuli.

8. *Intelligence*. Table 2 shows that the *t* ratio is not significant between the group means.

9. *Education*. Only high-school graduates or those with additional education were included as subjects. Even so, however, there is a significant difference between group means in education (Table 2). An analysis of variance was made to determine the comparative influence of age and education on total Rorschach responses (*R*).

TABLE 3
ANALYSIS OF VARIANCE TO DETERMINE INFLUENCE OF AGE, EDUCATION, AND ATTITUDE ON RORSCHACH NUMBER OF RESPONSES (*R*)

Factors Involved in Total Variance	Degrees of Freedom	<i>F</i>	Significance Level
Age and education	5 & 36	1.62	—
Age and attitude ^a	3 & 44	5.96	1%
Age only	1 & 44	2.18	—
Attitude only ^a	1 & 44	9.68	1%
Interaction of age and attitude ^a	1 & 44	6.05	5%

^a Religious attitude: conservative or liberal.

dividing the entire sixty subjects into ages twenty to thirty-five and thirty-six and above, and using educational levels 12-14, 15-16, and 17-and-above. The *F* ratio is not significant (Table 3). One may possibly conclude that of itself the educational level did not significantly influence Rorschach *R*.

10. *Student status*. A minimum of students was thought best in order to have a representation of the adult population. Three students are found among Conservatives, four among Liberals.

11. *Marital status*. This variable would have been very difficult to control directly. Reference to Table 1 will show that the groups were somewhat comparable on marital status.

12. *Denominational background*. The original selection of religious populations and the limitation of numbers with respect to churches constituted an attempt to control this variable. In a larger sense denominational background means early training as well as present affiliation. It would have been an endless task to assure representativeness in this particular.

13. *Lay-clerical status*. Only lay persons were selected.

14. *Sunday school teacher-member*. It is assumed that a teacher might show different personality trends from a student's though this assumption is problematical. No attempt was made to select with this factor in mind.

15. *Religious attitudes*. This is one of the experimental variables. There is so much variation in definitions of "liberal" and "conservative" that the selection for this study was made operational to the tests mentioned in the first part of Section III.

16. *Church attendance*. The groups were not equated on this factor, even though it may be an important one from an experimental standpoint. Almost no churches keep an actual person-by-person record of church (worship) attendance. Church relatedness is all that can be postulated. Church membership was not considered as a variable, since in most churches it has a rather loose correlation with a person's actual relation to the church.

17. *Clinical normality-abnormality*. All persons were assumed to be clinically normal, actually functioning in society in a relatively normal way. Three persons in the Liberal group had had psychiatric (noninstitutional) treatment at some time.

18. *"Emotional maturity."* Maturity as a whole was one of the (multiple) variables to be measured.

19. *Observer's reliability as examiner and scorer*. This variable was held as constant as possible, with the researcher as the one who administered all tests except the Salvation Opinionnaire, scored both Rorschachs and TAT's, and

made final decisions on the Rosenzweig.

20. *Validity and reliability of tests*. As indicated previously, these factors were assumed to be satisfactory.

21. *Form of contact with subjects*. One of the weakest links in the entire project is the manner of contact with prospective subjects. A delay forced by circumstances over which the writer had no control made contact with populations impossible at a time when Liberal churches were holding group meetings. The result was that twenty-five Conservatives were chosen from group distribution and five from letter distribution, while the numbers among Liberals were just reversed. A minute examination of the differences, if any, between group distributed and letter distributed may reveal some definite trends. But the research was continued as if both were the same, a possibly unjustified move.

22. *Volunteers*. Respondents to the Salvation Opinionnaire were asked to check if they would be willing to continue "in this very important religious project." Of the 490 who filled in the Opinionnaire 207 marked "Yes." In view of the selective nature of this factor, the study might be called, "An analysis of those who answer 'Yes' on religious questionnaires," or simply, "... of those who answer religious questionnaires."

Five of the Liberal subjects did not originally answer "Yes" on their returned letters. There were not enough Liberals who had checked assent who also came within the limits set on the Opinionnaire. So the writer had to pick at random three persons from the non-"Yes" group who did meet requirements; these persons manifested no hesitation in accepting a part in the research when the situation was explained to them. Two other non-"Yes" subjects were husbands of women who had consented to participate. No striking differences appear to be revealed between these five persons and the "Yes" group on personality measures, except that one of the five showed highly neurotic tendencies on Rorschach and TAT, including four C on the former.

In the course of the experiment other variables came into prominence, chief of which were:

23. *Acquaintance with examiner*. Four of the Conservatives selected as subjects were known to the researcher from previous contacts; besides this he was known to some of the Liberals by reputation. It is doubtful that basic personality materials could be concealed or more fully revealed because of the acquaintance. Nevertheless, this factor may have exerted some uncontrolled influence.

24. *Husband-wife combinations*. Participating married couples may have affected each other's responses to some indeterminate degree. If so, the influence was probably balanced, as there

were four man-and-wife combinations in the Conservative group and three in the Liberal, with one couple split between Conservatives and Liberals.

B. SELECTION OF SUBJECTS

Altogether 1035 Opinionnaires were distributed; 490 were returned, of which twenty-two were defective. By a process somewhat similar to sequential analysis, representative subjects were selected prior to complete returns. The form of the first distribution from which subjects were selected did not differ significantly from that of the final frequency distribution when all returns were in.

Two major divisions were made at the mean of the entire original distribution, 6.788. Each major division was considered to be a distribution in itself, overlapping the other to some extent, with the lower division mean at 4.951, and the upper division mean at 7.799. These submeans fall in the modal intervals for Conservatives (high end of scale) and Liberals (low end of scale).

The two subject groups were then selected from within plus and minus one probable error of the submeans. Discarding after a brief trial a complex (and compulsive) system of limitations of ranges of individual scores and numbers of questions, the writer adopted a common-sense procedure of having prospective subjects in each group in rather close agreement with one another in range and number of scores on their Opinionnaires. Where persons had checked a larger number than twelve (out of twenty-four) statements, they were excluded, as were those with only one statement checked.

Insofar then as the total "sample populations" are representative of religious liberals and conservatives—and the discussion above throws some doubt on

their representativeness—the "subsample populations" out of which subjects were drawn are definitely representative of liberals and conservatives.

C. UTILIZATION OF PERSONALITY MEASURES

When protocols of the sixty subjects had been obtained by the method outlined previously, scoring was completed (so simple it sounds—so many weeks it took!), and scoring categories which had been selected previously from the various tests and which tend to measure some kind of "maturity," were subjected to analysis.

On Rosenzweig's test the Group Conformity Rating scores were compared, even though Bernard (3) found little value in his studies of normals in the *GCR*; for it was assumed that if any normal-abnormal differences obtained between the groups investigated, the *GCR* would tend to bring them out. Reaction-type and direction of aggression columns were compared also, as well as the special cases of ego-defensiveness, *E* and *I*, which constitute "denials" in Bernard's terminology. Since not everything on the tests could be utilized, "trends" were not analyzed; but on examination these may show significant differences between Liberals and Conservatives.

Beck (1), Klopfer and Kelley (11), and Mons (12) were consulted for Rorschach interpretations. Klopfer's scoring system was employed with few exceptions. A new weighted score was added (which did not prove significant with normals, but might with nonnormals), "*Sum K*," comparable to *Sum C*, to represent the "insight-anxiety" continuum, as *Sum C* represents the "controlled responsiveness-uncontrolled responsiveness" continu-

um. Mons's psychograph (12, p. 92) suggests that the same kind of relation holds among FK , k , and K that holds for FC , CF , and C (also among M , FM , and m), with scores closer to the center of the graph indicating more favorable adjustments. $Sum K$, therefore, equals FK plus $2k$ plus $3K$, all divided by 2.

For A , Ad , and $Aobj$, distinctions are made which are not made in Klopfer and Kelley (who are not clear at this point). Ad was scored as "parts of living animals and doubtfully living (usually F)."
 $Aobj$ was scored as "parts of non-living animals."

The modern movement in refinement of content analysis promises to be more discerning of personality characteristics than some of the more formal analysis. Nevertheless, the writer kept to more widely accepted scores and ratios, except for $Sum K$, and to the more easily quantifiable aspects of the Rorschach.

By far the most labor went into processing TAT protocols. Tomkins (17), Murray (13), and Stein (15) were reviewed and found unsuitable for complete quantification of data. Therefore, an adaptation of the "Thematic Apperception Test Analysis Guide" (Wesley, 20) was employed, a system which allows for the scoring of smaller units than Murray's or Stein's systems (while at the same time not scoring every word as with Tomkins). The "Guide" depends in part upon Murray's definitions.

Guetzkow (9) takes up problems of unitizing and categorizing data on qualitative tests. He points out that much of the interpretation depends on what units the interpreter selects to score, and on the category sets he employs. As far as the present research is concerned, units were fairly well defined by the system, as phrases, sentences, or in some cases a

couple of sentences, units which could be taken as separate needs, press, inner states, or defense mechanisms. Where such a unit could not be scored with only one factor, that is, it expressed in the same words two dynamic trends or situations, the scorer did not hesitate to use two scoring factors. No attempt was made to score for levels (Tomkins), though it seems there is no reason why quantitative assessment could not be made of depth or level.

Altogether 273 factors were scored, some only a few times, but scored nevertheless. Therefore, separate scores were combined into what the writer believed to be operational units. These were combinations on theoretical bases, not on statistical analysis of separate scores.

The first 10 cases in each group did not receive scores on some of the factors. The reason is a purely personal and expedient one. At first the writer was scoring only on the scores which he had decided were significant to the research. But the procedure proved too frustrating. For the last forty cases all the scoring factors in the "Guide" and a few others were employed. Less frustration and less wasted time resulted from using more rather than fewer factors.

Since the change from scoring some to scoring all the factors also made a difference when transforming raw category scores into percentage scores (which were utilized for comparisons), when significance tests were run, tests for both thirty cases apiece and the last twenty cases apiece were made. It was assumed, however, that since omissions occurred in ten cases in each group, any discrepancy caused by the change would tend to balance itself out. In all cases except one, that designated Column 9,¹ $n Dep$, $-n$

¹ Defined below.

Dep (I), the assumption was borne out; in this case, the only seemingly unequivocal difference between the two groups of thirty cases apiece disappeared when twenty cases were compared.

Out of 49 combined-factor categories to which individual scores were assigned only 19 were compared, since the others did not yield enough scores to make significance tests. For the definitions of the individual scores comprising a category, reference will have to be made to the "Guide" already mentioned (Wesley, 20). But the combined categories are roughly characterized by the statements below; the reader may be able to follow the meanings of scoring symbols to some extent by comparing them with summaries. The scores were originally set up in columns, hence are referred to as "Columns" below.

Column 1: References to the external world, physical and mental capabilities, and opportunities in general, beneficial to hero. (*p Env*, *p Good*, *p Ment*, *p Oppor*, *p Phy*)

Column 2: Bad health, bad fortune, lack of opportunities, danger, or trouble in general, directed toward hero. (*p Afflic*, *p Bad*, *p Dang*, *p Troub*, *-p Env*, *-p Oppor*)

Column 3: Hero's feelings and attitudes ones of security, certainty, adequacy, calm, lack of turmoil and anxiety. (*Adeq*, *-Anx*, *-Conf*, *-Confl*, *Cert*, *-Dist*)

Column 4: Hero's feelings and attitudes ones of uncertainty, insecurity, inadequacy, turmoil and anxiety. (*-Adeq*, *Anx*, *Conf*, *Confl*, *-Cert*, *Dist*)

Column 5: Hero's self-blame, or failure to blame self. (*n Agg (I)*, *-n Agg (I)*)

Column 6: Hero's attacks on others, verbal or physical, including deception and rejection. (*n Agg*, *n Agg (P)*, *n Decep*, *n Rej*)

Column 7: Hero's resistance to authority, or show of independence rather than dependence. (*-n Compl*, *-n Dep*, *n Dep (I)*, *n Resis*, *-n Subm*)

Column 8: Hero's desire for or display of affection or friendship. (*n Affec*, *p Suc-Affec*, *n Affil*)

Column 9: Hero's dependency, or failure to trust in or depend on self. (*n Dep*, *-n Dep (I)*)

Column 10: Hero's desire for or success in gaining freedom. (*n Free*, *p Suc-Free*)

Column 11: Hero's sympathy with, protection of, or help directed toward another. (*n Emp*, *n Help*)

Column 12: Hero's failure to show sympathy, give

protection to, or help another. (*-n Emp*, *-n Help*) Column 13: Defense mechanisms employed either by subject or hero, or hero's defense of self. (*Def Mech*, *n Just*)

Column 14: Others' acceptance of, dependence on, affection for, or failure to reject or aggress against hero. (*-p Agg*, *-p Agg (P)*, *p Affec*, *-p Decep*, *p Dep*, *p Affil*, *-p Rej*)

Column 15: Others' aggression against, rejection of, lack of dependence on, or failure to show affection for hero. (*p Agg*, *p Agg (P)*, *-p Affec*, *p Decep*, *-p Dep*, *-p Affil*, *p Rej*)

Column 16: Others' restraint of or dominance over hero. (*p Coerc*, *p Dom*, *p Pers*, *p Proh*, *p Restr*)

Column 17: Others' sympathy with, protection of, or help directed toward hero. (*p Emp*, *p Help*)

Column 18: Failure of others to show sympathy with, give protection to, or help hero. (*-p Emp*, *-p Help*)

Column 19: Hero's striving for or success in achieving higher goals, money, education, or knowledge. (*n Ach*, *n Acq*, *p Suc-Ach*, *p Suc-Acq*, *p Suc-Cog*)

A number of individual scores on each test were specifically hypothesized in relation to various levels of maturity. Others were not. Only those which were hypothesized beforehand were allowed to influence conclusions directly. (See Section VI.)

V. QUANTITATIVE METHODS AND PROCEDURES

In reducing qualitative data to quantities some of the original quality is lost. Nevertheless, when the purpose is comparison of groups, quantitative comparisons are really the only accurate kind that can be made, for qualitative comparisons are too much subject to individual biases, too much influenced by the very individuals who should be partially disregarded in comparing groups, namely the individuals in the tails of the distributions.

Cronbach (4, 5) summarizes difficulties in making tests of significance on multi-score tests. For the Rorschach specifically he recommends raising the *P* value re-

TABLE 4
 RORSCHACH *M:SUM C* ADJUSTMENT SCALE FOR HIGH AVERAGE INTELLIGENCE ADULTS

Rank ^a	Ratios										
7				3:2 3:4	4:3 4:5	5:4 5:6	6:5 6:7	7:6 7:8 7:5	8:7 8:9 8:6	9:8 9:10 9:7	10:9 10:8
6				3:3 3:4	4:4 4:2	5:5 5:3	6:6 6:4	7:7 7:9 7:4	8:8 8:10	9:9 9:6	10:10 10:7
5			2:1 2:2 2:3	3:5	4:6	5:7	6:8		8:5		10:6
4		1:1 1:3 1:2	2:4 2:0	3:1 3:6	4:7 4:8 4:1	5:8 5:2	6:3 6:2 6:10 6:9	7:3 7:10	8:4	9:4 9:5	10:5
3	0:1 0:2	1:4 1:0 1:5	2:5 2:6	3:0 3:7 3:8 3:9	4:0 4:9 4:10	5:10 5:1 5:0 5:9	6:1 6:0	7:2 7:1 7:0	8:2 8:3	9:2	10:3 10:4
2	0:3 0:4 0:5 0:6	1:6 1:7 1:8	2:7 2:8 2:9	3:10					8:0 8:1	9:1 9:0	10:2 10:1 10:0
1	0:7 0:8 0:9 0:10+	1:9 1:10+	2:10+								11:0

^a High rank signifies high adjustment. See accompanying text for principles of construction.

quired for significance as the number of comparisons is increased. This suggestion was not adopted directly in the present research, but was kept, as it were, in the background. If *P* is raised to .001 rather than the usual .01 or less exacting standard, only two of the significance tests on personality measures in this study reach significance, *S* proportion to *R* on the Rorschach, and *TAT* Length of Stories. (Cf. Table 7.)

Before investigating thoroughly what others had done in making comparisons on multiscore tests, the writer had planned his statistics so that raw scores could be transformed into percentage scores or proportions for comparisons. He reasoned that if Rorschach *R*'s differed significantly (as they did differ in

his data, it turned out), any further comparison of raw scores would merely be a function of the total responsiveness of the two groups.

On the Rosenzweig, raw scores are transformed immediately into percentages; but these both mean the same anyway, for there can be just twenty-four total scores, except in the rare case of unscorable responses.

It was felt that the same argument would hold for the *TAT* as for Rorschach; therefore, percentages or proportions were compared.

Small denominators in ratios may be unreliable, so Adjustment Scales were constructed (see Tables 4 and 5, e.g.) which did not depend on working out fractions. Ratios were transformed into

TABLE 5
 RORSCHACH $FC:CF+C$ ADJUSTMENT SCALE FOR HIGH AVERAGE INTELLIGENCE ADULTS

Rank ^a	Ratios										
7								7:0	8:0	9:0	10:0
6				4:0	5:0	6:0 6:1	7:1	8:1	9:1 9:2	10:1 10:2	
5		1:0	2:0	3:0	4:1	5:1	6:2	7:2	8:2	9:3	10:3 10:4
4		1:1	2:1 2:2 2:3	3:1 3:2 3:3 3:4	4:2 4:3 4:4 4:5	5:2 5:3 5:4 5:5 5:6	6:3 6:4 6:5 6:6 6:7	7:3 7:4 7:5 7:6 7:7 7:8	8:3 8:4 8:5 8:6 8:7 8:8 8:9	9:4 9:5 9:6 9:7 9:8 9:9 9:10	10:5 10:6 10:7 10:8 10:9 10:10
3		1:2 1:3	2:4 2:5 2:6	3:5 3:6 3:7	4:6 4:7	5:7 5:8 5:9	6:8 6:8	7:9 7:10	8:10		
2	0:1 0:2 0:3	1:4 1:5 1:6	2:7 2:8	3:8	4:8 4:9	5:10	6:10				
1	0:4+ 0:0	1:7+	2:9+	3:9+	4:10+						

^a High rank signifies high adjustment. See accompanying text for principles of construction.

fractions only for making intragroup comparisons of rank orders on the two introversive-extrastensive ratios yielded by the Rorschach, $M:Sum C$ and $(FM + m):(Fc + c + C')$.

In working out the $M:Sum C$ and $FC:CF + C$ Adjustment Scales (Tables 4 and 5), ratios which were equal numerically were considered in part as equal psychologically, contrary to a warning by Cronbach. An examination of the $M:Sum C$ Scale (Table 4) reveals this fact patently in Rank 6 where ratios from 3:3 to 10:10 are grouped together. Whatever the meaning psychologically, however, the distributions on these two scales in both subject groups turned out to be fairly normal, though platykurtic.

Analysis of variance was discarded for comparisons because, in part, the experimental design was not planned as an analysis-of-variance experiment, but also

because the data cannot be handled by analysis of variance. The many scores on each test cannot be considered as different scores from different individuals, or even as different scores from the same individuals on the same test, but as different (though related) scores on different (though related) tests.

After consideration of other tests of significance and consultation with statistical authorities, simple t tests were chosen to make comparisons between the two groups of persons.

With the Rosenzweig, since the same number of total responses is found in all cases, there is probability of correlations among percentage columns; hence, correlation coefficients were obtained between the Obstacle-Dominance, Ego-Defensive, and Need-Persistence columns for Conservatives. The $O-D$ column is not significantly correlated with the

others. But the *E-D* and *N-P* columns correlated with an r of $-.65$, which is significant at the 1 per cent level.

The comparison of *E-D* and $\overline{E + I}$ means of the two groups showed a significant t ratio (2 per cent level). Since $\overline{E + I}$ is a combination of scores taken out of the *E* and *I* scores, and specifically from the *E-D* column, the writer was not sure how to handle this combination set of scores. He decided that if there was not a significant correlation between *E-D* and $\overline{E + I}$, no dependent relation would be shown, and a t test could be safely interpreted for $\overline{E + I}$. As it is, however, the coefficient of correlation, $.40$, is significant at the 5 per cent level. So in the final analysis the $\overline{E + I}$ comparison was discarded.

A question may be asked here (or anywhere), "Are the distributions of percentage scores on the various tests relatively normal?" The answer is, "Yes, for the most part." In only a few cases the distributions were skewed considerably. But both Conservatives and Liberals had skewed columns, and in the same direction. On the basis of practically normal

distribution of means of skewed distributions like these, it was decided that t tests could be utilized when skewness was practically the same in both curves to be compared.

A number of columns of both TAT and Rorschach scores contained too few scores to constitute a distribution in which t could be used on percentages of *R*. Therefore, when the scores that were present were scattered among a number of individuals and no one individual contributed an undue weight to the proportion, proportions of group scores to total responses were compared. The hypothesis to be tested was: The sum of Conservative or Liberal scores on each variable is in the same proportion to the combined Conservative and Liberal scores on that variable as the total number of responses of Conservatives or Liberals on the entire test is to the combined responses of both groups on the test. If the proportions differed significantly, the hypothesis was rejected.

Besides the foregoing, one minor comparison was made, that between rank-order correlation coefficients on the two

TABLE 6
SIGNIFICANT CORRELATIONS SHOWING RELATIONS BETWEEN TESTS AND WITHIN TESTS

Test or Factor	df	r or ρ	Significance Level ^a
Salvation Opinionnaire and Ferguson (Subjects and eliminees) ^b	38	.73	1%
Salvation Opinionnaire and Ferguson (Subjects only) ^b	28	.77	1%
Rosenzweig <i>E-D</i> and <i>N-P</i> (Conservatives only) ^b	28	-.65	1%
Rosenzweig <i>E-D</i> and $\overline{E + I}$ (Conservatives only)	28	.40	5%
Rorschach ($M:Sum\ C$) and ($FM+m:Fc+c+C'$) (Conservatives only) ^c	28	.39	5%

^a Refers, of course, only to probability level, not degree of association.

^b Pearson product-moment r .

^c Rank-order correlation between two Introversive-Extravertive ratios.

introversive-extratsensive ratios mentioned previously. The question to be answered was whether or not there was any higher correlation between these two supposed measures of introversion-extratsensiveness in one group than in the other. The coefficients were transformed into Fisher's z function in order to utilize a t test, which depends on the assumption of a normal distribution of sampling means or other statistics to be compared. It can be seen from Table 6 that the true correlation for Conservatives may be significant. That for Liberals was not significant; but a t test revealed no significant difference between the Conservative and Liberal coefficients.

Several original adjustment and balance scales were constructed in order to make further comparisons which cannot be made in simple percentages and proportions. These made use of Rorschach raw scores in their respective ratios. The first of these scales simply listed $M:Sum C$ ratios as introversive, extratsensive, or "no trend" on the basis of Rorschach theory. Even though additional M , FM , and m were not included, as Klopfer (11, p. 253) suggests they might be, both groups were very much overweighted in the introversive direction, Conservatives' frequencies being 22 introversive, 1 "no trend," and 7 extratsensive, and Liberals' frequencies 24, 5, and 1 respectively.

The other ratio indicating supposedly a person's *Erlebnistyp*, $(FM + m) : (Fc + c + C')$, yielded the same results as $M:Sum C$. Conservatives' ratios scored 24 introversive, 1 "no trend," and 5 extratsensive, and Liberals' 23, 2, and 5 respectively. If the two groups of this study manifesting such strong introversial trends on the I-E ratios are at all representative of the population at large, questions may be

asked either about the adequacy of the ratios or the usual assumptions about the distribution of introversion and extratsensiveness.

In conjunction with the above indicators of *Erlebnistyp*, the third major indicator suggested by Klopfer, the percentage of responses to the last three cards came the closest to theoretical expectations. Conservatives averaged 41.32 per cent with a standard deviation of 11.55; Liberals averaged 39.28 per cent, standard deviation 11.05.

$M:Sum C$ ratios were compared for the two groups by means of frequency distributions on the Adjustment Scale represented in Table 4. Prior to examination of the data from subjects studied, ratios within reasonable limits of $M:Sum C$ were grouped into seven classes on the basis of the following principles.

1. A slight unbalance either way represents a more favorable adjustment than an exact balance.
2. A greater unbalance of $Sum C$, in the smaller ratios especially, means a poorer adjustment than the same for M .
3. The quality of M and the presence of C are disregarded.
4. For above-average intelligence adults, at least three M 's should be produced for best adjustment.
5. Where a ratio has a fraction, .5, the figure is raised to the next higher whole number for matching to the Scale.

Whether the Scale has any psychological meaning is one question; whether on two distributions of ratios it appears to hypothetically correct, the question is answered affirmatively. A chi-square test of the hypothesis of normal distribution (Guilford, 10, p. 284f.) produced a chi square for Conservatives of .98. The ends of the theoretical and observed distributions were combined, making only three sets of discrepancies, but the number of degrees of freedom was judged to be four

(seven class intervals). Even if there were only one degree of freedom, however, .98 would not be significant. Other chi squares were not worked out for Liberals or for either group on the other Adjustment Scale below, since the forms of their distributions approximated the one already tested.

Table 5 presents the ratios of $FC : CF + C$ divided into seven classes, a set of rankings set up before the data from the research groups was examined. This Scale is not quite so successful from the standpoint of approximating normality as the $M : \text{Sum } C$ Adjustment Scale. It may, however, represent more psychological meaning than the other, since the upper levels of optimal adjustment include fewer persons than on the $M : \text{Sum } C$ Scale. The principles of construction of the scale are the following.

1. A balance toward FC is considered more favorable to adjustment.
2. The presence of C *per se* is disregarded.

Besides the above Scales, several Adjustment Dichotomies were constructed for comparison purposes. An $(FM + m) : (FC + c + C')$ Balance Adjustment Dichotomy was worked out on the following simple principles.

1. The more evenly balanced ratios are regarded as more favorable to adjustment (3:2, 2:3, etc.).
2. The absence of one or the other member of the ratio is not considered unbalanced if the ratio is small.

Apparently, this balance scale is satisfactory theoretically, for both groups produced a large majority of "balanced" individuals, 23 to 7 in each group, meeting expectations in a relatively normal population.

The two other dichotomies worked out to make comparisons between the groups were not so satisfactory from a statistical standpoint. A $W : M$ Balance was con-

structed on the following principles.

1. At least a 2:1, and better, a 3:1 ratio is held necessary for balance.
2. At least three M 's are considered necessary for balance.

The ratios divided the Conservatives into sixteen "balanced" and fourteen "unbalanced" persons and the Liberals into nineteen "balanced" and eleven "unbalanced." Additional factors such as the quality of W and M may be needed to make this Balance scale more meaningful.

A similar criticism of the statistical value of the $M : FM + m$ Balance can be made. This is a dichotomy in which ratios are divided into balanced and unbalanced according to the principles below.

1. At least two M 's and a ratio of 1:1 or at the most 2:3 are held necessary for good balance.
2. A preponderance of M is more indicative of adjustment than one of $FM + m$.
3. When larger numbers of M and $FM + m$ are produced, an unbalance in favor of $FM + m$ is not destructive of balance.
4. The presence of larger amounts of m compared to FM has not been regarded in making divisions.
5. The quality of the responses is disregarded.

The actual divisions into "balanced" and "unbalanced" ratios happened to be exactly the same as with the $W : M$ scale, sixteen and fourteen for Conservatives, and nineteen and eleven for Liberals.

"Gestalt limits" presented by both Klopfer and Mons for $W : D : d : Dd + S$ were supposed to be indicated by ranks ranging from 1 to 4, the latter representing the best adjustment, with an individual assigned a rank depending on how close he fell within the limits set forth in Klopfer's "Manner of Approach." It was found that *no one in either group* fell exactly inside the limits, and most persons fell far outside. Again, either the two groups are entirely apart

from the average or normal, or new norms are needed. The writer believes from other experience as well as this that serious questions can be raised about these so-called "gestalt limits."

The various scales which have been described are offered not only as the means by which the data of this research were ordered in part, but also as simpler models of what seems possible on a more

7. (The last line of the table is a variant of the ninth.) In order to evaluate the summary correctly two facts must be kept in view. First, at the 5 per cent level of significance one would expect two or three out of 52 *t* tests to be significant just by chance. And secondly, 43 out of 52 tests were *not* significant.

Relating the quantitative results to the hypotheses set up to guide research,

TABLE 7
SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN RELIGIOUS CONSERVATIVES AND LIBERALS ON PERSONALITY TESTS

Test Factor	Group having higher Mean Score, Mean Percentage, or Proportion	<i>t</i>	Significance Level
Rosenzweig <i>E-D</i> %	Conservatives	2.45	2%
Rosenzweig <i>E+I</i> %	Conservatives	2.64	2%
Rorschach <i>R</i>	Liberals	2.92	1% ^a
Rorschach <i>F+</i> : <i>R</i>	Liberals	2.58	2%
Rorschach <i>FK</i> : <i>R</i>	Liberals	2.14	5%
Rorschach <i>S</i> : <i>R</i>	Liberals	4.13	1%
Rorschach <i>P</i> %	Conservatives	2.77	1%
TAT Length of Stories	Liberals	5.28	1%
TAT <i>n Dep</i> , <i>-n Dep</i> (<i>I</i>) ^b %	Conservatives	2.64	2%
TAT <i>n Dep</i> , <i>-n Dep</i> (<i>I</i>): <i>R</i>	Conservatives	2.01	5%

^a 2% with Adjusted Liberal mean.

^b This refers to Column 9 defined in text.

complex plane. Rorschach experts have much to say about configurations and interaction of one score with others. But it seems that by grouping scores together that appear to go together and examining large numbers of normal records an empirical set of scales could be derived that would not depend only on how many different factors an intelligent interpreter can keep in mind.

VI. CONCLUSIONS

A. QUANTITATIVE COMPARISONS

Out of 52 *t* ratios computed, nine significant differences were found between percentage means, proportions, and two of the raw scores which were compared (Rorschach *R* and TAT Length of Stories). These are summarized in Table

one finds that the majority of the hypotheses must be rejected.

Hypothesis 1. Religious liberals are more "emotionally mature" than religious conservatives. Considering "emotional maturity" as a summation of individual aspects of "maturity" represented by scores on the personality tests, it was concluded that this hypothesis had to be rejected, or accepted only as applicable to limited areas. Four of the nine scores (Table 7), *E-D*, *F+*, *FK*, and *S*, were specifically hypothesized as testing maturity. The first three are in the direction of the hypothesis. Therefore, it might be said that in the areas of perceptual keenness and insight Liberals appear to be more fully developed (mature) than Conservatives. If the *E-D* *t* ratio

can be trusted, Liberals also tend to be less ego-defensive.

The other scores in Table 7 were not specifically set up for testing Hypothesis 1. It is not accepted scientific practice to base conclusions *ad hoc* on comparisons made after the data are inspected (though the principle is not observed in many instances). Therefore, these differences can be used as suggestive hypotheses for future research, but not directly as means of proof or disproof of the present proposition.

After all the significant differences are reviewed, however, and even if all of them should be admitted (if p should be set at .001 for significance, only two could be admitted), the fact stated above must be remembered: that on 42 other scores, most of which, if not all of which, are presumably independent, there are no significant differences. The majority of these 42 were specifically hypothesized in connection with the "emotional maturity" hypothesis, so must be held to be germane to its acceptance or rejection.

Hypothesis 2. Rigidity of personality structure and conservative religious attitudes are positively correlated. If Rosenzweig *E-D* and *E+I* were in columns uncorrelated with each other or with other columns, this second proposition might be accepted in part, since Conservatives could be shown to possess comparatively greater defensiveness or rigidity as measured on the Rosenzweig. But because correlations were found between *E-D* and other columns, linear relations (on which significance tests depend) most likely do not hold; therefore, the t ratios are suspect. The one major score on which a difference was expected to occur, $F\%$ on the Rorschach, did not show significant mean differences. *Ad 6600*

Hypothesis 3. Different types of emotional control are found in both groups.

It was anticipated that the Rorschach in particular would show that the Conservatives employ more intellectualized, formal types of control, while Liberals employ more emotional, inner types of control. The fact is, as tested by this study, no significant differences appear between the groups. Therefore, this hypothesis is rejected.

Hypothesis 4. Conservative individuals are more guilt-ridden than liberals. It was specifically stated prior to making comparisons that Conservatives would show higher indices in reference to guilt than Liberals on Rosenzweig *E-D*, TAT *n Agg (I)* and *Guilt*, and in corollary fashion would show more inadequacy and insecurity feelings as measured by TAT *Adeq* and *Anx* (and their negatives). Since the t ratio on the first score has possibly an ambiguous meaning, and none of the other t ratios approaches significance, Hypothesis 4 is not accepted.

Hypothesis 5. Liberals tend to gloss over aggression-provoking situations more than conservatives. *M* on the Rosenzweig, implying impunitive reactions to aggression, was thought above other scores to tend to measure a glossing over of aggression-provoking situations in connection with this hypothesis. No real difference obtains between the two groups according to this test, so the hypothesis is rejected.

Hypothesis 6. A greater need for dependence is found in the conservative. This is the one proposition among six which is accepted, though with reservations. Column 9 of the TAT, including scores *n Dep*, $-n Dep (I)$, has been shown to be somewhat suspect, in that on twenty cases apiece (the group in which the effects of possible scoring errors are removed), the significant t ratio disappears. It is not certain, however, that scoring errors are responsible.

In no other comparison of twenty cases apiece were the *t*-test results obtained on thirty cases changed. There is in Column 9 an overweighting of scores in the first ten cases among Conservatives. This condition could arise from scoring errors; but since in no other case did such overweighting occur from scoring errors, it seems reasonable to believe that the higher TAT scores (Column 9) in the first ten cases reflect the actual condition. So when they were eliminated, the other twenty scores did not truly represent the total distribution of Conservatives.

Also hypothesized, as a negative instance, was the Rorschach score *S*. Although it has other meanings, it is a sign of independence. The 1 per cent level of significance (in fact, the .001 level) favors Liberals in independence.

A further consideration that cannot be disregarded is the difference between *P*% means (1 per cent level). Although this score was not specifically hypothesized for the dependence-independence continuum, the fact that a real difference of means exists between the groups on *P*% adds no reason to reject the hypothesis.

On the opposite side of the ledger is Rorschach *A*%. It was strongly suspected that Conservatives would be much higher in this category. The fact that the obtained *t* ratio could easily occur by chance tends to militate against the acceptance of Hypothesis 6.

The writer must admit that the hypotheses he set up originally are not all clear-cut and admissible of unequivocal answers, as good hypotheses should be. They seemed to be satisfactory when first proposed, but the research showed how "fuzzy" several of them are. Future research along this line will have to

propound more single-minded hypotheses.

B. QUALITATIVE COMPARISONS

When the two groups under study are compared qualitatively, the same results approximately are yielded as in the quantitative comparisons. At the conclusion of testing all subjects, the writer had only one clearly defined opinion, that wide differences existed among individuals in the groups; but he had no idea whether these differences represented groups as such. In processing results the scores were so many and the scoring so complicated that it was impossible to tell at any time which group had more "balanced" scores. This inability to tell which way balance lay continued up to the very last comparison of all significance tests.

If further treatment of the writer's data or other future research with more refined methods should yield different conclusions, the writer would not deny that more adequate methods can produce different results. He feels that though his study has its values, it also has limitations.

The major qualification to be kept in mind in interpreting results is that only 490 out of 1035 persons returned the Salvation Opinionnaire. Such a situation introduces a selective factor which may make for nontypical samples. This response factor operated to a greater extent among Liberals than among Conservatives, for twenty-five out of thirty Liberals were selected from letter-distributed returns and only five out of thirty Conservatives were so selected. Group distribution yielded virtually 100 per cent returns, so the selective factor under consideration did not affect Conservatives to an appreciable degree.

One mitigating circumstance may indicate that the Liberal sample is representative of religious Liberals as a whole. Wonderlic (intelligence) scores revealed that Liberals were more intelligent than Conservatives (1 per cent level), when comparisons were made involving both subjects and eliminees (those with scores below 20 on the Wonderlic or inconsistent scores on the two religious tests). This finding is in keeping with previous research.

In the meantime it may be stated that if these samples are representative of their respective religious populations, and if the tests actually measure what they are supposed to measure, and if the writer's reliability as examiner and scorer is sufficient, the religious populations designated as "Liberal" and "Conservative" appear to be one in matters of personality and of maturity, with only one admissible exception found in this study, that of greater dependency among conservatives.

VII. SUMMARY

1. The Salvation Opinionnaire (19) was sent to or administered directly to 1035 persons, of whom 490 returned the Opinionnaire and information sheet.

2. Sixty persons (30 persons in each group) were chosen whose scores on the Opinionnaire and Ferguson's Primary Social Attitude No. 1 (Religionism) indicated representativeness of religious liberalism or conservatism, and whose Wonderlic Personnel Test (intelligence) scores were 20 or above. Other means of selection were employed to assure comparability on nonexperimental factors.

3. Rosenzweig's Picture-Frustration Study, the Rorschach, and the Thematic

Apperception Test were administered to the sixty subjects.

4. Selected variables relating to "emotional maturity" were compared by means of *t* tests of percentage, proportion, or ratio-frequency scores.

5. It was found that nine out of fifty-two significance tests showed statistically significant or very significant differences between means or proportions.

6. On the whole it was found that the two religious-attitude groups could be considered samples from the same population as regards personality factors, with the likely exception of dependency feelings in which a greater need is shown by the religious conservatives.

No specific meaning has been attached to the greater Liberal responsiveness on the Rorschach and TAT, since there seems to be no agreement on specific significance of the amount of responsiveness, except for pathological rejections and consequent constriction of records.

What meaning, in terms of explanation, greater dependency on the part of Conservatives has can only be conjectured at this time. It may mean, on the analogy of the experience of others who have been investigated in this area of dependence, that such dependence has been fostered from early childhood. Or it may mean that the type of religious training which Conservatives have received tends to promote feelings of dependence. Of course, some combination of these two aspects may be the actual situation. The writer is inclined to believe it is more probable that those with similar types of dependency needs, arising out of infancy and early childhood training, would band together for mutual support.

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